IN THE CLAIMS

Claim 1 has been amended as follows:

1. (Currently Amended) In a magnetic resonance apparatus having a basic field magnet which generates a basic magnetic field, the improvement of a gradient coil system operable with at least one current flowing in said gradient coil system in said basic magnetic field, said gradient coil system having at least one oscillatory mode which is excitable during said operation of said gradient coil system, and having stiffening elements heterogeneously arranged in said gradient coil system which reduce said at least one oscillatory mode by mechanically stiffening said gradient coil system.

2. (Original) A gradient coil system as claimed in claim 1 comprising gradient coils cast in a casting compound, and wherein at least one of said stiffening elements has a section also cast in said casting compound.

3. (Original) A gradient coil system as claimed in claim 1 wherein said stiffening elements comprise a fiber.

4. (Original) A gradient coil system as claimed in claim 3 wherein said fiber is selected from the group consisting of glass fibers, carbon fibers and aramid fibers.

5. (Original) A gradient coil system as claimed in claim 1 wherein at least one of said stiffening elements is a bundle of fibers.

6. (Original) A gradient coil system as claimed in claim 5 wherein said fibers in said bundle of fibers are selected from the group consisting of glass fibers, carbon fibers and aramid fibers.

7. (Original) A gradient coil system as claimed in claim 1 wherein at least one of said stiffening elements is pre-stressed.

8. (Original) A gradient coil system as claimed in claim 1 further comprising a controllable device mechanically connected to at least one of said stiffening elements for setting a mechanical stress of said at least one of said stiffening elements.

Claim 9 has been amended as follows:

9. (Currently Amended) A gradient coil system as claimed in claim 8 wherein said controllable device comprises a piezoelectric element <u>disposed to mechanically interact with said at least one of said stiffening elements to set said mechanical stress</u>.

10. (Original) A gradient coil system as claimed in claim 8 wherein said at least one of said stiffening elements has a longitudinal end, and wherein said controllable device is disposed at said longitudinal end.

11. (Original) A gradient coil system as claimed in claim 1 further comprising a sensing device in mechanical contact with at least one of said stiffening

elements for sensing a mechanical stress of said at least one of said stiffening elements.

12. (Original) A gradient coil system as claimed in claim 11 wherein said sensing device comprises a piezoelectric element.

13. (Original) A gradient coil system as claimed in claim 11 wherein said at least one of said stiffening elements has a longitudinal end, and wherein said sensing device is disposed at said longitudinal end.

14. (Original) A gradient coil system as claimed in claim 1 wherein said gradient coil system is approximately rotationally symmetrical relative to a central longitudinal axis.

15. (Original) A gradient coil system as claimed in claim 14 wherein said stiffening elements are heterogeneously disposed along a closed loop in a rotational direction around said gradient coil system.

16. (Original) A gradient coil system as claimed in claim 14 wherein at least one of said stiffening elements has a longitudinal path that penetrates said gradient coil system in a direction of said longitudinal axis.

17. (Original) A gradient coil system as claimed in claim 14 wherein at least one of said stiffening elements has a longitudinal path parallel to said longitudinal axis.

18. (Original) A gradient coil system as claimed in claim 14 wherein at least one of said stiffening elements has a longitudinal path that intersects a straight line parallel to said longitudinal axis.

19. (Original) A gradient coil system as claimed in claim 1 wherein said gradient coil system has a hollow-cylindrical shape.